



**AGREEMENT FOR
COLLABORATION ON MULTI-MEDIA ACTIVITIES
BETWEEN
THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
AND
DREAMTIME HOLDINGS, INC.**

Note: Redacted portions requested by Dreamtime currently under NASA review.

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BACKGROUND

For a number of years the National Aeronautics and Space Administration (NASA or Agency) has been planning for utilization of the United States share of the International Space Station (ISS). To spur commercial interest, NASA has set aside one-third of its share specifically for commercial uses, while preserving the remaining two-thirds for scientific and engineering research. Congress, too, has been concerned that U.S. industry be encouraged to utilize the unique capabilities of the ISS. In the 1998 Commercial Space Act, Congress declared commercial utilization to be one of the primary goals of the U.S. Space Station Program and directed NASA to actively seek commercial users for the ISS. That same legislative action required that NASA fund an independent market study of potential commercial uses. However, when the panel of outside experts began to study the issue, it found that, except for a few potential pathfinder areas, the commercial interest in the ISS was not mature enough to support a traditional market analysis.

One of the most promising commercial markets identified by the Congressionally mandated study was in the area of space imagery, including education, advertising and entertainment. While not utilizing the ISS for its core science and technology missions, the imagery area was recommended by the study for the potential for early commercial revenue generation and for increasing overall awareness of the commercial potential of the station. NASA's own experience was consistent with the Congressional study, as the Agency had been approached by several multimedia entities interested in the imagery that the ISS assembly activity was beginning to generate. Since each of these multimedia companies proposed some level of commercial exclusivity in the imagery, and to assure that the Agency offered this opportunity to all interested parties before foreclosing any access, NASA published a Notice of Intent to Negotiate Partnership Agreement(s) for the Development of Multi-Media Products and Services Related to the Exploration and Development of Space, on December 7, 1999 (the Announcement.)

As stated in that Announcement, NASA was interested in collaborations with the private sector to create new business opportunities based on potential public demand for high quality, live and recorded still and video images of space scenes and activities, including those related to the assembly and operation of the ISS. NASA offered access to ground and on-orbit facilities, its film and video archives and ISS images. It also indicated that where there was significant private investment resulting in benefits to the agency and the public as a whole, it might agree to limited exclusive rights. The Announcement resulted in 12 offers, which were evaluated on the criteria that NASA had published in the Announcement. Dreamtime submitted an offer that was deemed the most advantageous to the Agency and negotiations have resulted in the following Agreement for Collaboration on Multi-Media Activities (this Agreement). Dreamtime is the only firm selected to collaborate on these multi-media products and services in response to the Announcement.

PREAMBLE

NASA, the United States civilian space agency, and Dreamtime Holdings, Inc., (Dreamtime), a multimedia company organized to develop a space Internet vertical portal (the "Vortal"), multimedia database, and television and documentary programming (each a Party and collectively the Parties) are entering into the following collaborative agreement under which each Party will provide value to establish an ISS commercial demonstration project. Planned participants with Dreamtime in this collaboration include [REDACTED]

[REDACTED] The intent of this collaboration is multi-purposed and includes: mutual promotion of space activities; generation of educational web, documentary and TV content; digitization of currently underutilized NASA archives; implementation of a web-searchable multimedia database; shared use of state-of-the-art high definition television equipment placed on the ISS, Space Shuttles and at NASA Centers and Jet Propulsion Laboratory (JPL) provided by Dreamtime; and shared use of state-of-the-art high definition television editing stations provided by Dreamtime. NASA will provide access to and accommodations for Dreamtime high definition television equipment and services, including on the Space Shuttle, the ISS and at various other NASA locations. Dreamtime will use this new capability to produce images for its use that will be distributed utilizing various communication technologies with special emphasis on the Internet. NASA will also receive rights to use the images developed under this Agreement for Agency purposes, including public affairs, scientific and engineering, research and development, and missions and operations, as further defined in this Agreement. Dreamtime will have rights to commercial use of certain images developed under this Agreement, as defined in this Agreement. To the extent permitted by law and in accordance with this Agreement, NASA will protect Dreamtime s confidential commercial information, including copyrighted materials and digital images created under this collaboration, that are not released in the public domain. In addition, the Parties will collaborate on the development of educational products and documentary programming with the goal of increasing the public awareness of the ISS and its related programs. To assist in the development of these products and programs, NASA will make available its still, film and video archives to Dreamtime for digitization and enhancement. NASA will obtain rights to use this material as specified in this Agreement. Over the term of the Agreement, the value of the private participants contribution is estimated to exceed one hundred million dollars (\$100,000,000.)

NASA and Dreamtime recognize the unique nature of this early ISS commercial opportunity. Since the value of this opportunity can only be determined by the prices that the market will pay for Dreamtime s commercial images, related products and services, and in accordance with the Space Station Demonstration program established by Congress, NASA will share in the increase in Dreamtime s value that these activities create. Details of the Parties contributions, rights and responsibilities are set out below. In consideration of the foregoing, the Parties hereto hereby agree as follows:

ARTICLE I DESCRIPTION OF THE ARRANGEMENT

1.1 Description of the Arrangement

This Agreement is a collaborative effort to share the human exploration and development of space with a wider audience using digitized images that can be employed across a variety of platforms, especially the Internet. Each Party will bring to bear resources, equipment, personnel, facilities and expertise for the joint undertaking and each will share in the output of this collaboration in a synergistic manner.

Dreamtime's executive management, equity partner agreement plans, and overall schedule milestones are set forth in Annex 1. Further details regarding the Parties' respective responsibilities, milestones and approach for managing the activities contained in this Agreement are set forth in Annexes 2 through 6.

1.1.1 High Definition Television (HDTV), Standard Definition Television (SDTV) , collectively known as Digital Television (DTV)

The Parties will target completion of the establishment of a joint-use HDTV capability agency-wide to occur no later than 2004. Dreamtime will retain ownership and replacement responsibility (including spares and upgrades) of the cameras and related equipment, (hereinafter the equipment) that it provides for joint use through the duration of this Agreement. Formats and standards for DTV equipment will adhere to existing NASA technical standards. Future evolution of standards for non-orbit DTV equipment will be determined jointly between NASA and Dreamtime. NASA and Dreamtime will share the use of the equipment and rights to the images created using the cameras, as described elsewhere in this Agreement. Details regarding the specifications for and provision of the equipment, the Parties' respective responsibilities and an integrated schedule for the HDTV transition are set forth in Annex 3. For purposes of this Agreement, HDTV Equipment means all equipment used to generate, transmit & receive, record, switch, edit, or manipulate HDTV signals. HDTV is defined as any video signal with 720 or more active vertical lines of video (1280 H X 720 V pixels or 1920 H X 1080V pixels) as listed in the Advanced Television Systems Committee (ATSC) Digital Television Standard A-53 document, Table 3.

a. Orbit

A collaborative goal is to eventually replace all National Television Systems Committee (NTSC) equipment and convert from analog NTSC to digital SDTV and HDTV. NASA and its programs will plan for progressive evolution to a higher camera resolution based on industry and NASA standards with input from both government and industry partners. On-orbit DTV upgrades will follow an evolutionary path. In the short term the Parties will completely replace all crew compartment cameras with SDTV, and some HDTV for live down links and on-orbit recording consistent with current Space Shuttle plans. In the long term, replacement of all ISS and Space Shuttle cameras with HDTV & SDTV is a collaborative objective. Implementation of the long-term camera replacement will be determined

by the outcome of the short-term flight test objectives and a cost benefit assessment by both Parties. The ISS and Space Shuttle programs will make the final determination regarding replacement of any system cameras whether internal or external.

Dreamtime will provide flight certified HDTV and SDTV equipment for testing, crew training, and flight on the ISS and the 4 Space Shuttles. NASA will qualify the Dreamtime-provided, NASA-specified camera for Development Test Objective (DTO) utilization only, for use on Space Shuttle flight STS-105. NASA and Dreamtime will work together to solve the current technical issues affecting the on-orbit durability of the HDTV equipment. Dreamtime will provide replacements, including spares and upgrades. NASA will perform the on-orbit maintenance for the equipment. NASA will integrate Dreamtime flight-certified cameras. Certification and the mutually agreed schedule for supplying cameras and possible other interface equipment will be worked out in the future immediately following the execution of this Agreement. NASA will provide to Dreamtime all appropriate documentation regarding the flight certification process and specifications for video equipment and make available facilities necessary for certification. NASA will test, launch, operate, and return the video equipment. The ISS cameras and encoders will be identical to those deployed on the Space Shuttle wherever possible.

(i) Short Term HDTV Planning for Handheld Internal Cameras

The two technologies required for successful deployment of a HDTV downlink system are a radiation-hardened camera and a contribution-level encoder capable of variable bit-rates. Dreamtime- supplied and commercially available camcorders will be considered, tested and certified, as soon as possible. The Parties will pursue radiation effects testing of camera elements. This should be considered as an early enabling activity critical to the early development phase. Dreamtime- provided equipment will be delivered at a date far enough in advance to facilitate testing, and training.

Taking the Space Shuttle and ISS Program manifest into consideration, the planned first flight with an HDTV downlink is planned for STS-105. Other DTO flight opportunities will be determined at a later date.

(ii) Long Term HDTV Planning

The long-term HDTV plan may consider a number of elements. These elements could consist of one or more of the following, upon mutual agreement of the Parties:

- (a) enhancements to the crew compartment DTV equipment based on the results of the short-term plan- These enhancements could include a replacement of all analog equipment with DTV, upgrade from SDTV to HDTV, technology improvements over the short-term DTV, etc.;

- (b) development of an external DTV capability on the ISS via one of the attached sites identified for commercial payloads. This capability would be pursued between the Parties as a commercial payload operating within the guidelines for resources allocated for commercial users. Additional details regarding this scenario are set forth in Section 1.1.3 hereto;
- (c) enhancements of existing/planned external camera systems- DTV systems could be deployed initially to augment planned capability. As this capability matures and is demonstrated, overall upgrades to the entire system may be considered;
- (d) New capabilities- New capabilities may be considered when determined to be in the mutual interests of the Parties. One example is a phased array antenna, which could be deployed on both the Space Shuttle and ISS; and
- (e) ground processing systems- Ground processing systems need to be addressed in this plan as well. There most likely will be a period where both analog and digital ground processing systems will need to be maintained. The ground processing systems will need to be compatible with the on-orbit equipment regardless of the on-orbit configuration. These systems could also benefit from the enhancements outlined in subparagraph (a) above.

The specific implementation of any of these plans would be subject to a mutual agreement by the Parties. These decisions will be based on the results of the short-term planning as described above, as well as the results of the costs and benefits to both Parties. The Parties recognize that any of these plans will most likely occur in a multi-phase approach, where the plans implemented will be significantly more complex at each phase point.

b. Terrestrial

Dreamtime will provide HDTV and SDTV equipment at all the NASA centers, JPL and Headquarters. NASA and Dreamtime will share the maintenance of the terrestrial equipment. Dreamtime will provide replacements, including spares and upgrades. NASA and Dreamtime will develop a maintenance plan using NASA maintenance and Dreamtime resources in an effective manner. NASA will continue to be responsible for the routine operational maintenance of video equipment provided by Dreamtime. The Parties have taken these responsibilities into account in assigning their respective rights and obligations under this Agreement.

1.1.2 Programming Content

a. Educational

Dreamtime, working with appropriate NASA educational personnel, will develop creative and innovative initiatives to support the following: (i) informal educational programming, *e.g.*, networked, multimedia planetarium programs; (ii) teacher pre-service education programs to prepare K-12 teachers in science, mathematics, and technology; and (iii) enhanced instructional products and dissemination methods. Initiatives developed will be consistent with the NASA Implementation Plan for Education 1999-2003.

b. Documentary/News

Dreamtime, working with appropriate NASA personnel, will develop documentary programs for broadcast over a major outlet, as set forth in Annex 4. Documentary related content will also be distributed through Dreamtime's websites.

c. Other

The Parties recognize that the quantity of on-orbit imagery is limited by the scarcity of user crew time and data downlink capacity. Therefore, the Parties will explore ways to maximize use of ground based imagery derived from normal NASA operations (*e.g.* training, planning and real time operations) to build programming content. Such programming will draw from data catalogs created using Dreamtime-provided ground-based HDTV and SDTV equipment described in subsections 1.1.1.a and 1.1.1.b., above.

Further details regarding programming are contained in Annex 4.

1.1.3 Distribution

As further detailed in Annex 3, since Dreamtime and NASA will both contribute equipment and services that enable the streaming and delivery of imagery from the ISS and Space Shuttles, each Party will have an allocation of rights to the use of these on-orbit capabilities including data downlink capacity. These allocations will be implemented over time to accommodate mission events and the Parties' specific priorities. Dreamtime will receive an allocation of Space Shuttle crew time, as agreed by the Parties on a mission by mission basis, taking into account the need to meet primary Space Shuttle mission objectives. Prior to assembly complete Dreamtime's allocation will be a percentage of NASA's allocation of user crew time and data transmission capacity for commercial payloads. At assembly-complete, the Parties anticipate that Dreamtime will receive a payload allocation of 78 hours per year of on-orbit ISS user crew time on a non-interference basis, 1 Terabit of space to ground, one-half of a 3-kilowatt (kW) Rack Site and 1440 kilowatt-hour (kWh) of energy. Parts of this allocation could be a shared, external attach site. In this context, non-interference basis recognizes that Dreamtime's on-orbit allocations come from a pool of resources created after the critical system operations requirements have been met. To support both Space Shuttle and Station on-orbit payload activities, NASA will provide launch and return services, integration, verification of Dreamtime-certified equipment and training in agreed quantities for the above 3-kW Rack Site payload. Dreamtime will have an opportunity to use additional on-orbit resources on a reimbursable basis as available. All references in this Agreement, including the Annexes

hereto, to reimbursable use of NASA capabilities or additional resources, will require a separate agreement or an annex to this Agreement.

Prior to the assembly complete stage of the ISS, Dreamtime will receive an allocation of 15% of the NASA commercial resource allocation beginning in Planning Period 4 (PP4). PP4 is an approximate 1 year period beginning on the closest crew rotation to January of a calendar year. PP4 is Flight 12A in 2002. The allocation will not exceed the amount agreed to beginning at assembly complete. (See Table 1 of Annex 3)

The Parties recognize that receiving digital still imagery within a short period after it has been downlinked from the Space Shuttle or ISS will be advantageous to Dreamtime's business case. NASA will make the processed image files available via File Transfer Protocol (FTP) or other expeditious method to Dreamtime for Dreamtime's use in commercial activities as soon as it is available for distribution.

NASA and Dreamtime recognize the availability of mission still film imagery, as soon as practical after it has been returned to the ground, will be fundamental to Dreamtime's business plan. NASA will provide digital files of mission film imagery, in digital form, as soon as its ready to be released for distribution.

a. NASA Television

The Parties will explore the extent to which Dreamtime can take advantage of excess capacity on NASA Television to utilize Dreamtime's expertise to provide high quality educational programming largely targeted at children's interests. The Parties will work together to quantify NASA's baseline and develop estimates for the quantity of time that may, on average, be available for use by Dreamtime. All use of NASA Television transponder time will be provided on a reimbursable basis. The Parties shall determine which NASA television production facilities and other resources will be made available to Dreamtime on a non-interference basis as part of this collaboration. NASA will retain the right to preemptive programming and preemptive facility use to meet NASA's public affairs, operational and other agency programming needs. The Parties will work together to maintain the governmental nature of NASA Television, but at the same time develop ways to use this distribution outlet more effectively. To the extent permitted by laws, regulations and policies, NASA will permit Dreamtime's reimbursable use of the NASA transponder as described in this article.

b. Broadcast Television/Cable

Dreamtime commits to provide equity or commercial partners with total broadcast/cable distribution capability reaching a minimum of 65% of U.S. homes. Dreamtime will utilize a proven television documentary production team. Distribution in excess of this threshold is a joint goal of the Parties. The Parties will explore rebroadcast opportunities in addition to the development of original content.

c. Internet Access to NASA Websites; Linkages among NASA and Dreamtime Websites

NASA recognizes that Dreamtime's business plan is primarily based on the establishment of the Vortal, which will feature the images and content developed under the Agreement, and that individuals visiting NASA websites may also be interested in the Dreamtime Vortal. Therefore, the Parties will develop an approach for the linkage between selected NASA and Dreamtime websites that maximizes cross-fertilization of website content to achieve the broadest scope of content and distribution. NASA will provide prominent links from NASA websites to Dreamtime websites, such linkages will be no less prominent than accorded to any other third party entities for Commercial Use. In so doing, the Parties will develop a method for clearly delineating between NASA-only websites and content, Dreamtime websites and content and other websites and content in order to clearly identify the brand to be associated with each website and unit of content. Parties will also develop an approach to ensure that each Party's website content will not be altered or distributed in an unauthorized manner. Finally, the approach will reflect NASA's obligation to make NASA-created website content available to the general public free of charge, and Dreamtime's commitment to provide a high level of privacy protection to those visiting their Vortal dictated by industry standard Internet privacy practices. The Parties will, as soon as possible, assign points of contact to act as interfaces for the Dreamtime website development and maintenance, as well as to develop and manage linkages between the various websites. NASA recognizes that the Dreamtime website may include advertising and sponsorships, the guidelines for which will be by determined mutual agreement of the Parties. The advertising guidelines, privacy and website policies will be defined and easily accessible from the Vortal. The advertising and sponsorship guideline agreement will mirror commercial standards set by typical family oriented web sites. NASA will not unreasonably withhold approval for advertising and sponsorships that follows these commercial practices. NASA and Dreamtime agree to explore opportunities of jointly developing internet web sites. For purposes of this Agreement, "Internet" means any systems for distributing digital electronic content and information to end users via transmission, broadcast, public display, or other forms of delivery, whether direct or indirect, whether over telephone lines, cable television systems, optical fiber connections, cellular telephones, satellites, wireless broadcast, or other mode of transmission now known or subsequently developed.

1.1.4 Archives and Multimedia Database

The Parties will jointly determine the portion of the NASA archives that are of sufficient interest to justify the effort and expense of digitization, and shall prioritize the order of digitization accordingly. The Parties anticipate that a significant portion of the NASA archives, as further described in Annex 6, will be digitized and agree that Dreamtime will have an opportunity to provide input as to which images are likely to be of commercial interest. Dreamtime plans to transfer analog images to digital, and to create a multimedia digital database for many of the NASA historical images. New images will be added to this database as appropriate. The material to be digitized includes still photographic, audio, video, metadata, and motion picture film. Dreamtime will offer photographs to the public at different levels of quality. Lower resolution photographs will be offered free of charge.

Initially consumers will be able to purchase photographs on-line with credit cards and later other payment mechanisms will be enabled. An on-line wallet will also be offered as a convenient e-commerce option for consumers. The same commerce wallet will be used across the Vortal for purchase of other space-related goods and services. Details of the archiving digitization efforts are set out in Annex 6.

1.1.5 Access to JPL Data

Dreamtime is aware that JPL is a contractor-operated facility. The data archive (including images and identifying information) at JPL ("JPL Data") was created under a contract between the contractor and NASA. NASA will use reasonable efforts to gain Dreamtime's access to and use of the JPL Data in performance of its activities under this Agreement.

ARTICLE II NASA FINANCIAL BENEFITS

Within 90 days from the signature of this Agreement, the Parties will negotiate an approved, detailed arrangement for financial remuneration to NASA, in accordance with the Space Station Demonstration Program established by Congress.

ARTICLE III ACCESS TO NASA TERRESTRIAL FACILITIES AND PERSONNEL

3.1 In addition to the allocation of access to on-orbit and Earth-to-orbit assets described above, NASA will provide Dreamtime with access to NASA's terrestrial facilities and personnel to enable Dreamtime to perform its responsibilities under this Agreement. A goal of the collaboration effort is to minimize disruption of ongoing NASA activities. To this end, Dreamtime will use NASA processes, procedures and contractors to the extent commercially practicable.

3.2 In recognition of the fact that Dreamtime will be collaborating with NASA to fulfill joint mission interests, (e.g., promotion of the space program and development of education material) the access will be priority access as defined in Annex 4. In recognition of the fact that NASA's personnel resources are limited and that NASA personnel who may be filmed will be in the process of preparing or implementing other NASA missions, the access will be provided with NASA escort/oversight as necessary. Whenever feasible, NASA will notify Dreamtime reasonably in advance and in writing of any postponement of contemplated services due to other NASA mission priority, but NASA at its sole discretion will determine priorities for use of its facilities and equipment.

3.3 In addition to the priority access to NASA facilities and personnel provided as part of this Agreement, Dreamtime may request, and NASA may, under separate agreements or annexes to this Agreement, grant additional access, which may be provided on a non-interference, reimbursable basis.

3.4 Dreamtime agrees that as a condition of access to NASA facilities and services, its employees, contractors, and agents will comply with all applicable NASA regulations and directives, with particular attention to those related to security and safety, while on U.S. Government installations and during the duration of this Agreement. Any failure by NASA to obtain timely access for Dreamtime and its approved subcontractors and consultants will constitute an excusable delay for Dreamtime.

ARTICLE IV APPROPRIATIONS

NASA will not provide any appropriated funds to Dreamtime under this Agreement. The Parties will be responsible for the costs of fulfilling their respective responsibilities under this Agreement. NASA's ability to perform its obligations under this Agreement is subject to the availability of appropriated funds. In the event Congress materially reduces appropriations to NASA, such lack of appropriations will be subject to Section 5.2, Force Majeure, of this Agreement. NASA will at all times use all reasonable efforts to obtain needed funding; however, in the event adequate funding becomes unavailable, the Parties will promptly meet to discuss in good faith any necessary adjustments to the Parties' obligations hereunder.

ARTICLE V
PERIOD OF PERFORMANCE; FORCE MAJEURE; TERMINATION

5.1 Term of Agreement

This Agreement will enter into effect as of the date of the last signature on the signature page hereof (the "Effective Date") and shall remain in effect from such date for an initial term of seven years (the "Initial Term"), with an option to extend for an additional five-year extension period (the Extension Period) based on the mutual agreement of the Parties.

5.2 Force Majeure

Each of the following events shall be events of force majeure (Event of Force Majeure), and no omission or failure to carry out or observe any of the terms, provisions or conditions of this Agreement shall be deemed to be a breach of this Agreement, if the same shall be caused by or arise out of:

5.2.1 a declaration of war by the Congress of the United States;

5.2.2 a declaration of a national emergency by the President of the United States;

5.2.3 acts of God or any public enemy;

5.2.4 significant acts of an agency or branch of the United States Government (other than NASA), in either a sovereign or contractual capacity (including, inter alia, failure of Congress to appropriate sufficient funding);

5.2.5 fires, floods, earthquakes, unusually severe weather, expropriation, requisition, confiscation, nationalization and any other significant event, matter or thing, wherever occurring, which shall not be within the reasonable control of the Party affected thereby.

5.3 Notice of an Event of Force Majeure

If a Party's ability to perform its obligations under this Agreement is affected by the occurrence of an Event of Force Majeure, such Party shall within five (5) days upon learning of such an event and ascertaining that its performance hereunder will be affected, give notice in writing to the other Party hereto, stating the nature of the Event of Force Majeure, the anticipated duration thereof and any action being taken by the affected Party to mitigate, avoid or minimize the effect of such Event of Force Majeure. The burden of proof to demonstrate that an Event of Force Majeure has occurred and that such Event of Force Majeure substantially affects a Party's ability to perform hereunder shall be on the Party claiming relief from performance as a result thereof. The Parties shall meet within ten (10) days of receipt of the above notice to discuss in good faith the appropriate measures that should be taken, including any necessary adjustments to the Parties' obligations hereunder. The Party affected by the Event of Force Majeure shall promptly take whatever actions necessary to mitigate the effects of such Event of Force Majeure on its ability to perform its obligations hereunder.

5.4 Suspension of Performance

The suspension of performance due to an Event of Force Majeure shall be of no greater scope and no longer duration than is reasonably required to correct deficiencies of performance created by or arising out of such Event of Force Majeure. The excused Party shall use its best efforts to remedy its inability to perform in a prompt fashion.

5.5 Remaining Obligations

Obligations of the Parties under this Agreement that are not affected by a particular Event of Force Majeure shall not be excused as a result of an occurrence of an Event of Force Majeure causing the suspension of performance of those obligations affected thereby.

5.6 Termination Following an Event of Force Majeure

In the event that an Event of Force Majeure continues for a period in excess of 180 days, the affected Party's efforts to avoid or minimize the effect of such Event of Force Majeure have not been successful, and the Parties have been unable following good faith discussions to agree on appropriate actions as provided in Section 5.3 above, the affected Party may elect to terminate, in whole or in part, this Agreement. Upon such election, the affected Party shall provide reasonable advance written notice to its intent to terminate (in no case fewer than 60 days) to the other Party.

5.7 Termination upon Material Breach

Either Party may terminate this Agreement upon a material breach by the other Party of any of its principal obligations hereunder; provided, however, that breaching Party shall have 90 days following receipt of written notice from the non-breaching Party specifying the existence and exact nature of such breach, to cure such material breach to the reasonable satisfaction of the non-breaching Party, if the breach is capable of being cured. For purposes of this Agreement, a "material breach" shall mean a failure to perform any principal obligation hereunder, which failure fundamentally impairs or harms the non-breaching Party's expected benefits under this Agreement. Principal obligations include, but are not limited to: timely performance of actions under Annex 1; Dreamtime's reasonable access to NASA facilities for fulfillment of Dreamtime's obligations under this Agreement; Dreamtime's digitization of NASA archives and public access to the digitized images as provided in Article I; NASA's integration and launch of HDTV equipment/systems on or to Space Shuttles and the ISS.

5.8 Alternate Opportunities

In the event that NASA is unable to meet any of its on-orbit obligations, including schedules, affecting Dreamtime's business, NASA will make reasonable, good faith efforts to offer Dreamtime alternate opportunities, or Dreamtime may assert its rights under Section 5.6, above.

5.9 Limitation on Damages

Neither NASA nor Dreamtime shall be liable for any loss of profits, revenue, or any indirect or consequential damages incurred by the other Party, its contractors, subcontractors, or customers as a result of any suspension or termination of this Agreement. A Party's liability for damages under this Agreement is limited solely to direct damages (arising naturally or ordinarily from breach of the Agreement), incurred by the other Party, as a result of any termination of this Agreement subject to mitigation of such damages by the complaining party.

5.10 Continuing Obligations

Except as otherwise provided in this Article, the Parties agree that the obligations of each Party set forth in Articles II, VI and VIII, as applicable, will remain in effect after expiration or termination of this Agreement by either Party for any reason.

5.11 Application of the Disputes Article

The provisions of Article IX Consultation and Settlement of Disputes, are applicable to disputes arising under this Article.

ARTICLE VI LIABILITY OF THE PARTIES

6.1 Purpose. The objective of this Article is to establish a cross-waiver of liability by the Parties and related entities in the interest of encouraging participation in the exploration, exploitation, and use of outer space through the ISS. This cross-waiver of liability shall be broadly construed to achieve this objective.

6.2 Definitions. For the purpose of this article:

6.2.1 The term damage means:

- a. bodily injury to, or other impairment of health of, or death of, any person;
- b. damage to, loss of, or loss of use of any property;
- c. loss of revenue or profits; and
- d. other direct, indirect, or consequential damage.

6.2.2 The term launch vehicle means an object (or any part thereof) intended for launch, launched from Earth, or returning to Earth which carries payloads or persons, or both.

6.2.3 Liability shall include payments made pursuant to United States treaty, any judgment by a court of competent jurisdiction, administrative and litigation costs, and, after consultation with Dreamtime, settlement payment.

6.2.4 A Partner State means each contracting party for which the Agreement Among The Government of Canada, Governments of Member States of the European Space

Agency, the Government of Japan, the Government of the Russian Federation, and the Government of the United States of America Concerning Cooperation on the Civil International Space Station (signed January 29, 1998; hereinafter the Intergovernmental Agreement) has entered into force or become operative (pursuant to Articles 25 and 26, respectively, of the Intergovernmental Agreement), or any successor agreement. A Partner State includes its Cooperating Agency. It also includes the National Space Development Agency of Japan.

6.2.5 The term **Party** means a party to this Agreement.

6.2.6 The term **payload** means all property to be flown or used on or in a launch vehicle or the ISS.

6.2.7 The term **Protected Space Operations** means all launch vehicle activities, ISS activities, and payload activities on Earth, in outer space, or in transit between Earth and outer space done in implementation of the ISS Agreements. It includes, but is not limited to, the following:

- a. research, design, development, test, manufacture, assembly, integration, operation, or use of launch or transfer vehicles, the ISS, or a payload, as well as related support equipment, and facilities and services.
- b. all activities related to ground support, test, training, simulation, or guidance and control equipment, and related facilities or services.

Protected Space Operations excludes activities on Earth which are conducted on return from space or from the ISS to develop further a payload's product or process for use other than for ISS-related activities in implementation of the ISS Agreements.

6.2.8 The term **related entity** means:

- a. a contractor or subcontractor of a Party or a Partner State at any tier;
- b. a user or customer of a Party or a Partner State at any tier; and
- c. a contractor or subcontractor of a user or customer of a Party or a Partner State at any tier.

The term **related entity** may also apply to another State, or an agency or institution of a State, having the same relationship to a Partner State as described in subparagraphs 6.2.8a through 6.2.8c above, or otherwise engaged in Protected Space Operations as defined in subparagraph 6.2.7 above. The terms **contractors** and **subcontractors** include suppliers of any kind.

6.3 Cross-Waiver of Liability

6.3.1 Except as provided under paragraph 6.3.4 below, each Party agrees to a ~~cross~~-waiver of liability pursuant to which each Party waives all claims against any of the entities or persons listed in subparagraphs 6.3.1a through 6.3.1d below based on damage arising out of Protected Space Operations. This cross-waiver shall apply only if the

person, entity, or property causing the damage is involved in Protected Space Operations and the person, entity, or property is damaged by virtue of its involvement in Protected Space Operations. The cross-waiver shall apply to any claims for damage, whatever the legal basis for such claims, against the following:

- a. the other Party;
- b. a Partner State other than the United States of America;
- c. a related entity of any entity identified in subparagraphs 6.3.1a or 6.3.1b above; and
- d. the employees of any entity identified in subparagraphs 6.3.1a through 6.3.1c above.

6.3.2 In addition, each Party shall, by contract or otherwise, extend the cross-waiver of liability as set forth in subparagraph 6.3.1 above to its related entities by requiring them to:

- a. waive all claims against the entities or persons identified in subparagraphs 6.3.1 a through 6.3.1d above; and
- b. require that their related entities waive all claims against the entities or persons identified in subparagraphs 6.3.1a through 6.3.1d above.

6.3.3 For avoidance of doubt, this cross-waiver of liability includes a cross-waiver of liability arising from the Convention on International Liability for Damage Caused by Space Objects (which entered into force on September 1, 1972), where the person, entity, or property causing the damage is involved in Protected Space Operations, and the person, entity, or property damaged is damaged by virtue of its involvement in Protected Space Operations.

6.3.4 Notwithstanding the other provisions of this Agreement, this cross-waiver of liability shall not be applicable to the following:

- a. claims between a Party, its related entity, or between its own related entities;
- b. claims made by a natural person, his/her estate, survivors, or subrogees for bodily injury, other impairment to health or death of such natural person, except where the subrogee is a Party to this Agreement or has otherwise agreed to be bound by the promises of this cross-waiver;
- c. claims for damage caused by willful misconduct;
- d. intellectual property claims;
- e. claims for damage resulting from a failure of a Party to extend the cross-waiver of liability to its related entities, pursuant to subparagraph 6.3.2 above; or
- f. claims by or against a Party arising out of or relating to the other Party's failure to meet its contractual obligations set forth in the Agreement.

6.3.5 Nothing in this article shall be construed to create the basis for a claim or suit where none would otherwise exist.

ARTICLE VII EXPORT CONTROL

Within the context of this Agreement, NASA and Dreamtime will each be responsible for ensuring its own compliance with U.S. export laws and regulations. For imagery from Dreamtime provided cameras, NASA and Dreamtime will develop a screening process to make determinations on any applicable restrictions precluding public release (including any possible restrictions under U.S. export laws and regulations).

ARTICLE VIII DATA, INVENTION, AND IMAGERY RIGHTS AND NASA BRAND

Except as mutually agreed to by the Parties in the performance of this Agreement, each Party agrees that there will be no use of the other Party's marks and logos nor assigning of rights and benefits associated with the marks and logos without the other Party's written consent. The Parties will work together to develop mutually agreeable joint promotions. Any use of NASA marks and logos by equity or commercial partners of Dreamtime or Dreamtime logos and marks by NASA's contractors or other partners will involve additional rights negotiations and compensation between the entity and the Party.

8.1 Patent and Invention Rights

8.1.1 Definitions

The term Non-NASA Personnel, as used in this Agreement, means any non-NASA personnel accommodated on the NASA Orbiters or on the International Space Station or any other entity as mutually agreed.

8.1.2 General

Title to inventions made (conceived or first actually reduced to practice) in the performance of activities under this Agreement will remain with the respective inventing parties (Dreamtime or NASA), and no patent or invention rights are exchanged between or granted by such parties under this Agreement except as provided herein.

8.1.3 NASA Inventions:

NASA will use reasonable efforts to report inventions made by NASA employees in the performance of specified NASA activities under this Agreement. Upon request, NASA will use reasonable efforts to grant Dreamtime, in accordance with the requirements of 37 CFR Part 404, an exclusive or partially exclusive, revocable, royalty-bearing license, on terms to be subsequently negotiated to any NASA invention that may be made under the Agreement and on which NASA decides to file a patent application. This license will be subject to the rights reserved in paragraph 8.1.6a, below.

8.1.4 NASA Contractor or non-NASA Personnel Inventions

In the event NASA contractors or non-NASA Personnel are tasked to perform work in support of specified NASA activities under this Agreement and inventions are made by contractor employees or non-NASA Personnel or jointly between NASA employees and contractor employees or non-NASA Personnel, and NASA has the right to acquire or has acquired title to such inventions, NASA will use reasonable efforts to report such inventions. Upon request, NASA will use reasonable efforts to grant Dreamtime, in accordance with the requirements of 37 CFR Part 404, an exclusive or partially exclusive, revocable, royalty-bearing license, on terms to be subsequently negotiated to any NASA invention that may be made under the agreement, that NASA may have the right to acquire title to or that NASA has acquired title to, and on which NASA decides to file a patent application. This license will be subject to the rights reserved in paragraph 8.1.6(b) and (c), as appropriate, below. NASA acknowledges that Dreamtime is not a NASA contractor.

8.1.5 Joint Inventions With Dreamtime

NASA and Dreamtime agree to use reasonable efforts to identify and report to each other, and to cooperate with each other in obtaining patent protection on any inventions made jointly between NASA employees (or employees of NASA contractors or non-NASA personnel, in the event NASA has the right to acquire or has acquired title in such inventions) and employees of Dreamtime. Upon timely request, NASA may (1) agree to refrain from exercising its undivided interest in a manner inconsistent with Dreamtime's commercial interests, or (2) use reasonable efforts to grant Dreamtime, in accordance with the requirements of 37 CFR Part 404, an exclusive or partially exclusive, revocable, royalty-bearing license, on terms to be subsequently negotiated. Both options (1) and (2) are subject to the applicable rights reserved in paragraph 8.1.6, below.

8.1.6 Rights to be Reserved in Dreamtime's License:

Any license granted to Dreamtime pursuant to paragraphs 8.1.3, 8.1.4, or 8.1.5 above will be subject to the reservation of the following rights:

- a. As to inventions made solely by, or jointly with, NASA employees, the irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention by or on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States.
- b. As to inventions made solely by, or jointly with, employees of NASA contractors, the rights in the Government of the United States as set forth in 8.1.6(a) above, as well as the revocable, nonexclusive, royalty free license in the contractor as set forth in 14 CFR/1245.108.
- c. As to inventions made solely by, or jointly with, non-NASA Personnel, the rights in the Government of the United States as set forth in 8.1.6a above, as well as any rights reserved by the employer of the non-NASA Personnel.

8.1.7 Protection of Reported Inventions

When inventions are reported and disclosed between the Parties in accordance with the provisions of this clause, the receiving Party agrees to withhold such reports or disclosures from public access for a reasonable time (presumed to be 1 year unless otherwise mutually agreed) in order to facilitate the allocation and establishment of the invention and patent rights under these provisions.

8.1.8 Patent Filing Responsibilities and Costs

The invention and patent rights set forth herein shall apply to any patent application filed and patents obtained in any country, and each Party is responsible for its own costs of preparing, prosecuting, issuing, and maintaining patents covering sole inventions in any country; except that NASA and Dreamtime may, upon the reporting of any invention (sole or joint) or in any license granted, mutually agree otherwise for any country as to patent application preparation, filing and prosecution responsibilities and costs, and maintenance responsibilities and costs. As to any invention made jointly between NASA employees (or employees of a NASA contractor or non-NASA Personnel in the event that NASA has the right to acquire or has acquired title to such inventions) and employees of Dreamtime and for which Dreamtime files a patent application, Dreamtime agrees to include the following statement therein:

The invention described herein may be manufactured and used by or for the U.S. Government for U.S. Government purposes without the payment of royalties thereon or therefore.

8.2 Property Rights In Data

8.2.1 Definitions

The term Data, as used in this clause, means recorded information, regardless of form, the media on which it may be recorded, or the method of recording. The term includes, but is not limited to, data of a scientific or technical nature, computer software and documentation thereof, and data comprising commercial and financial information. The term Data as used in Article 8.2 is limited to data exchanged or generated in the course of performing activities under this Agreement related to the resolution of technical issues including, but not limited to, those affecting the on-orbit durability of the HDTV equipment. If this Agreement is modified to include any additional research and development projects then the term Data may be expanded to include such research and development project.

8.2.2 General

Data (including software) will be exchanged between NASA and Dreamtime free of disclosure and use restrictions except as provided herein.

8.2.3 Background Data

In the event it is necessary for either Party to furnish any existing data (either data of its own or existing data of a third party) to the other Party in the course of performing activities under this Agreement related to the resolution of technical issues including, but not limited to, those affecting the on-orbit durability of the HDTV equipment, and such data

embody trade secrets or comprise commercial or financial information that is privileged or confidential, then such data will be maintained in confidence by the receiving Party, its contractors and non-NASA Personnel using reasonable efforts not to disclose such data to any person or entity outside of the receiving Party, its contractors and non-NASA Personnel without the written permission of the providing Party. To the extent that the providing Party desires such existing, proprietary data delivered to the receiving Party to be maintained in confidence, the providing Party shall inform the receiving Party that such data are considered to be proprietary information by placing thereon an appropriate and clearly legible notice, legend, stamp, marking, or other positive written identification that indicates such data are proprietary. If any existing proprietary data is disclosed orally or visually by the providing Party, such oral or visual data shall be reduced to writing by the providing Party, and every page of such writing containing proprietary data shall be identified as above and then delivered to the receiving Party within ten (10)°days after the initial oral or visual disclosure of such proprietary data, or the receiving Party shall have no duty to maintain it in confidence. All appropriately identified existing, proprietary data delivered hereunder to the receiving Party shall remain the property of the providing Party. At the conclusion of this Agreement, or at a mutually agreed upon earlier time, all appropriately identified existing, proprietary data and copies thereof shall be returned to the providing Party or destroyed promptly at the providing Party's request.

8.2.4 Dreamtime Produced Data

In the event it is necessary for Dreamtime to furnish NASA with data that is produced by Dreamtime in the course of performing activities under this Agreement related to the resolution of technical issues including, but not limited to, issues affecting the on-orbit durability of the HDTV equipment, and such provided data embody trade secrets or comprise commercial or financial information that is privileged or confidential and such data is so identified with a suitable notice or legend, then to the extent permitted by law, NASA will maintain the confidentiality of the data and disclose and use the data (under suitable protective conditions) by or on behalf of the U.S. Government for U.S. Government purposes only.

8.2.5 Data First Produced by NASA

As to data first produced by NASA in the course of performing activities under this Agreement related to the resolution of technical issues including, but not limited to, issues affecting the on-orbit durability of the HDTV equipment, and such data would embody trade secrets or would comprise commercial or financial information that is privileged or confidential if it had been obtained from Dreamtime, such data will, to the extent permitted by law, be appropriately marked with a notice or legend and maintained in confidence for a period of 5 years after the development of the information. Such data may be disclosed and used (under suitable protective conditions) by or on behalf of the U.S. Government for U.S. Government purposes only during the 5 year period after the development, and thereafter for any purpose whatsoever without restriction on disclosure and use. Dreamtime agrees not to disclose such data to any third party without NASA's written approval until the aforementioned restricted period expires.

8.2.6 Data Disclosing an Invention

In the event data exchanged between NASA and Dreamtime discloses an invention for which patent protection is being considered and the furnishing Party specifically identifies such data, the receiving Party agrees to withhold such data from public disclosure for a reasonable time (presumed to be 1 year unless mutually agreed otherwise) in order for patent protection to be obtained.

8.2.7 Copyright:

In the event data is exchanged in the course of performing activities under this Agreement related to the resolution of technical issues, including but not limited to issues affecting the on-orbit durability of the HDTV equipment, and is marked with a notice indicating that the data is protected under copyright, such data will be presumed to be published and the following paid-up licenses shall apply:

a. If it is indicated on the data that the data existed prior to, or was produced outside of, this Agreement, the receiving Party and others acting on its behalf, may reproduce, distribute, and prepare derivative works for the purpose of carrying out the receiving party's responsibilities under this Agreement.

b. If the furnished data does not contain the indication of (a) above, it will be assumed that the data was first produced under this Agreement, and the receiving Party and others acting on its behalf, may reproduce, distribute, and prepare derivative works for any of its own purposes whatsoever.

c. The forgoing expressly excludes imagery data. The Parties' rights to imagery data is governed by Article 8.3 of this Agreement.

8.2.8 Disclaimer of Liability:

Notwithstanding the above, neither NASA or Dreamtime shall be restricted in, nor incur any liability for, the disclosure and use of:

a. Data not identified with a suitable notice or legend;

b. Information contained in any data for which disclosure and use is restricted under paragraphs 8.2.3, 8.2.4 and 8.2.5 above, if such information is or becomes generally known without breach of the above, is known to or is generated by either NASA or Dreamtime independently of carrying out NASA's or Dreamtime's responsibilities under this Agreement, is rightfully received from a third party without restriction (where such third party did not receive the data from NASA or Dreamtime), or is included in data which Dreamtime has, or is required to furnish to the U.S. Government without restriction on disclosure and use.

8.2.9 NASA and Dreamtime agree to inform and instruct its employees and any others permitted access to data protected under paragraphs 8.2.3, 8.2.4 and 8.2.5 and marked with a notice to such effect, under this Agreement of its and their obligations under this clause and

to appropriately bind its employees and any others permitted access contractually to comply with the access, use, disclosure, and reproduction provisions of this clause.

8.2.10 In the event that data marked with a notice in accordance with paragraphs 8.2.3, 8.2.4, and 8.2.5 include a legend that a receiving Party to this Agreement deems to be ambiguous or unauthorized, such receiving Party may inform the providing party of such condition. Notwithstanding such an alleged ambiguous legend, as long as the legend provides an indication that a restriction on use or disclosure was intended, the receiving Party shall treat such marked data pursuant to the requirements of this clause until the matter is resolved by mutual agreement of NASA and Dreamtime.

8.2.11 Export Control

Data, whether or not specifically identified or marked, that is subject to the export laws and regulations of the United States and that is provided to Dreamtime under this Agreement will be treated as such by Dreamtime, and will not be further provided by Dreamtime to any foreign persons without having obtained proper U.S. Government authorization, where required.

8.3 Property Rights In Imagery

8.3.1 Definitions:

a. The term, NASA Historic Archives, as used in this Agreement, means analog, print/still images, film and video, NASA Digitized Images and NASA Physical Property Archives and identifying data which are or could be legally available for public dissemination;

b. The term, NASA Physical Property Archives, as used in this Agreement, means any manuals, diagrams, blueprints, space vehicles or models thereof and any other documents of historical significance which are or could be legally available for public dissemination. NASA and Dreamtime will determine those physical properties which may be digitized and incorporated by Dreamtime into the Multimedia Database;

c. The term Straight Scan Master Copy, as used in this Agreement, means the digital rendering of analog imagery from the NASA Historic Archives performed by Dreamtime under this Agreement, including any necessary rudimentary dusting and/or minor color correction;

d. The term NASA Digitized Images, as used in this Agreement, means the imagery that NASA has already digitized or continues to digitize during the course of this Agreement which are or could be legally available for public dissemination;

e. The term NASA Digital Historic Archive, as used in this Agreement, means the compilation of the Straight Scan Master Copies and the digitized scans from the NASA Physical Property and the NASA Imagery Created Using Dreamtime's Equipment;

f. The term Enhanced NASA Historic Archive, as used in this Agreement, means the collection of enhanced images that Dreamtime creates from the NASA Historic Archive and the NASA Physical Property;

g. The term Multimedia Database, as used in this Agreement, means the compilation of the NASA Historic Archives, Enhanced NASA Historic Archive, the NASA Digital Historic Archive, Dreamtime New Imagery and NASA New Imagery into a database. Notwithstanding the inclusion of the NASA Historic Archives and the NASA New Imagery into the Multimedia Database, the imagery contained therein remains in the public domain;

h. The term Dreamtime New Imagery, as used in this Agreement, means the still, film and video imagery created using Dreamtime's camera and video equipment;

i. The term NASA Imagery Created Using Dreamtime's Equipment, as used in this Agreement, means the still, film and video imagery created by NASA, and its affiliates, using Dreamtime's camera and video equipment during on-orbit and ground-based operations which are or could be legally available for public dissemination;

j. The term NASA New Imagery, as used in this Agreement, means the still, film and video imagery created by NASA and its affiliates on non-Dreamtime equipment during the duration of this Agreement which are or could be legally available for public dissemination;

k. The term NASA Controlled Use, as used in this Agreement, means the on-orbit NASA Imagery Created Using Dreamtime's Equipment created/compiled into a 30 minute time period per week, unlimited live and recorded interviews and the 8 hours of ground based imagery released per week that is reserved for Public Affairs Uses, for use at NASA's sole discretion;

l. The term Dreamtime Scripted Imagery, as used in this Agreement, means the still and video imagery created using Dreamtime's camera and video equipment during the Dreamtime Scripted Period;

m. The term Dreamtime Scripted Period, as used in this Agreement, means the time period of 78 hours/crew time/year of on-orbit and the mutually agreed upon ground-based use, on a non-interference basis, that Dreamtime receives under this Agreement for specific use of the HDTV camera and video equipment;

n. The term Commercial Use, as used in this Agreement, means the experiments, apparatus, or facilities on the orbiters, the International Space Station and at ground-based facilities that are employed by users engaged in the research, development or production of commercial products or services. Commercial Use expressly excludes NASA Internal Use;

p. The term Government Use, as used in this Agreement, means the experiment, apparatus, or facilities on the Space Shuttle, the ISS and at ground-based facilities that are fully funded by the federal government and conducted by or on behalf of the federal government;

q. The term Commercial Use Imagery, as used in this Agreement, means imagery created using Dreamtime's equipment for Commercial Use purposes;

r. The term NASA Internal Use, as used in this Agreement, means use by NASA and its affiliates for purposes including Educational Use, Mission and Operational Use, Research and Development Use, Civic Project Use and Government Use. NASA internal use expressly excludes dissemination, distribution or broadcast to the general public, news media or to third parties for Commercial Use;

s. The term Civic Project Uses, as used in this Agreement, means mutually agreed use of imagery supporting community and public relation efforts including museums, planetary and art exhibitions, science centers, agency testimony, space related symposiums, seminars, conferences and activities such as state fairs which may include attribution to Dreamtime;

t. The term Mission and Operational Use, as used in this Agreement, means use by NASA and its affiliates for any purposes including, but not limited to, support of ISS or Space Shuttle operations, maintenance, or utilization;

u. The term Public Affairs Use, as used in this Agreement, means the widest practicable dissemination, distribution or broadcast of knowledge, news and information to the general public, news media or to third parties in the form of imagery and text through the mediums including, but not limited to, print, film, television, Internet, video and radio;

v. The term Research and Development Use, as used in this Agreement, means research and development in basic or applied science or engineering conducted by NASA or its affiliates. The term includes systematic inquiries in order to discover or revise facts and theories and the application of the research results to design, prototype, test and/or evaluate systems or processes;

w. The term Educational Use, as used in this Agreement, means use for the purpose of supporting the NASA prescribed instructional or programmatic goals for the external educational community including, but not limited to, students, institutions of higher education, faculty, informal educational institutions and museums, and non commercial science centers or planetariums;

x. The term NASA and its affiliates, as used in Article 8.3 of this Agreement, means NASA, other federal governmental entities, its contractors, Non-NASA Personnel and other entities as mutually agreed;

y. The term Baseline Format, as used in this Agreement, means the combination of Ground Baseline Format and On-orbit Baseline Format;

z. The term Ground Baseline Format, in this Agreement, means the format commonly used by NASA as of the Effective Date of this Agreement, for ground video capabilities (which is composite NTSC for wireless transmissions and component NTSC tape for taped video for ground video recordings.) For ground video capabilities, Ground

Baseline Format will be deemed to have changed to SDTV format from NTSC (composite or component) on the earlier of (i) when 1/3rd of the US households, as determined by FCC publication, can view broadcast video in HDTV format (1/3rd Viewing Date) or (ii) three years from the Effective Date of this Agreement; and

aa. On-orbit Baseline Format, in this Agreement, means the format commonly used by NASA as of the Effective Date of this Agreement, for on-orbit video capabilities (which is composite NTSC for wireless transmissions and component NTSC tape for taped video for on-orbit video recordings.) For on-orbit video capabilities, On-orbit Baseline Format will be deemed to have changed to SDTV format from NTSC (composite or component) on the earlier of (i) one year from the 1/3rd Viewing Date or (ii) four years from the Effective Date of this Agreement.

8.3.2 General:

a. Imagery created by NASA and its affiliates using the camera or video equipment of a party other than Dreamtime, is not affected by the terms of this Agreement in any way.

b. NASA New Imagery created concurrently with this Agreement will become part of the NASA Historic Archives available to the public and at the mutual agreement of the parties, may be digitized by Dreamtime and included in the NASA Digital Historic Archives to be protected for 5 years from the development of the imagery, to the extent permitted by law, as commercial information of Dreamtime.

8.3.3 NASA Historic Archives:

a. Dreamtime will digitize the analog imagery (and may digitize the NASA Physical Property Archives) from the NASA Historic Archives in accordance with the schedule in Annex 6 and will provide NASA with a Straight Scan Master Copy. NASA will incorporate the Straight Scan Master Copy and the digitized scans of the NASA Physical Property into the NASA Digital Historic Archives.

b. To the extent permitted by law, NASA will protect the Straight Scan Master Copy and the digitized scans of the NASA Physical Property in the NASA Digital Historic Archives as commercial data produced by Dreamtime under this Agreement for a period of 5 years from the development of the data. At the end of the 5-year period, all restrictions on NASA's use of the images expire and the images will be accessible to the public.

c. Notwithstanding 8.3.3b, NASA may, in its sole discretion, use the Straight Scan Master Copy and the digital scans of the NASA Physical Property Archives in the NASA Digital Historic Archives for Public Affairs Uses as limited to breaking or spot news and Civic Project Uses, except that the agreement of Dreamtime is not required for Civic Project Uses under this paragraph, and for NASA Internal Uses. There are no restrictions on the use of the NASA Digitized Images.

d. NASA Historic Archives will continue to be publicly available. Public access to the NASA Historic Archives will not be affected by any terms of this Agreement. This

includes the right of third parties to digitize any and all portions of the NASA Historic Archives.

8.3.4 New Imagery:

a. Dreamtime Scripted Imagery: Dreamtime Scripted Imagery will be the property of Dreamtime. It is the sole responsibility of Dreamtime to provide for the protection of images contained in the Dreamtime Scripted Imagery and the enforcement of any restrictions placed on the reproduction and use of the Dreamtime Scripted Imagery. Before the Dreamtime Scripted Imagery is incorporated into the Multimedia Database, NASA has the right to edit in accordance with Article XI, Public Information. NASA has the right to use Dreamtime Scripted Imagery for Public Affairs Uses with the mutual agreement of Dreamtime, for limited Public Affairs uses such as breaking or spot news at NASA's sole discretion, and for NASA Internal Uses. When appropriate, and with mutual consent, there will be attribution to Dreamtime. In addition, NASA has the right to pre-empt Dreamtime's scheduled use for contingency and off-nominal events.

b. NASA Imagery Created Using Dreamtime's Equipment: Imagery created by NASA and its affiliates using Dreamtime equipment during time periods other than the Dreamtime Scripted Period may be used by NASA in high resolution HDTV for NASA Controlled Use, limited NASA Public Affairs Uses, NASA Internal Uses as described below and in Baseline Format for Commercial Uses, as further described below.

(i) Limited NASA Public Affairs Uses of the NASA Imagery Created Using Dreamtime's Equipment includes uses for breaking or spot news, in NASA's sole discretion.

(ii) NASA receives the NASA Controlled Use period to create/compile or have created/compiled 30 minutes a week of imagery through the use of the Dreamtime equipment and to create/compile up to 8 hours of ground-based imagery for release per week. In addition, NASA reserves the right to use the Dreamtime equipment for unlimited live and taped interviews with NASA and its affiliates and non-NASA Personnel. The imagery from the NASA Controlled Use is reserved for all Public Affairs Uses, in the sole discretion of NASA. The limited NASA Public Affairs Uses of the NASA Imagery Created Using Dreamtime's Equipment as defined in (i) above, and the NASA Controlled Use are recognized by Dreamtime as being available to the public immediately with no restrictions as to its use by NASA and its further distribution and use by NASA or the public.

(iii) NASA Imagery Created Using Dreamtime's Equipment will be incorporated into the NASA Digital Historic Archives and will be protected to the extent provided by law as commercial data of Dreamtime under this Agreement for a period of 5 years from the development of the imagery. At the expiration of the 5-year period, this imagery will be made available to the public. Dreamtime may have access and use of the NASA Imagery Created Using Dreamtime's Equipment, specifically excluding Commercial Payload uses and proprietary data of NASA and its affiliates.

(iv) Entities engaged in Commercial Use may use the Dreamtime digital equipment but are restricted by the terms negotiated in this Agreement to the receipt of only Baseline Format imagery from the use of the digital Dreamtime equipment. Dreamtime acknowledges that absent a specific agreement to the contrary between Dreamtime and the Commercial Use customer the imagery, captured for these customers through the use of Dreamtime equipment, is proprietary to these customers and will not be shared with Dreamtime in any manner. The Commercial Use customer may use the Baseline Format imagery in its sole discretion, with no restrictions on its use of the imagery.

(v) NASA Imagery Created Using Dreamtime's Equipment may also be used for NASA Mission and Operation Uses. To that end, NASA Imagery Created Using Dreamtime's Equipment may be relayed to the Johnson Space Center in HDTV and relayed to NASA TV in Baseline Format at NASA's discretion. Dreamtime acknowledges that the NASA TV Baseline Format imagery is immediately available to the public without restrictions on NASA's use or further use and dissemination by NASA and the public. Dreamtime and NASA will mutually develop equipment for converting the HDTV signal into a Baseline Format signal for release on NASA TV in real time. Before Dreamtime converts this transmission from HDTV to Baseline Format, Dreamtime must ensure that the other NASA Centers and other entities designated by NASA have the capability to receive the HDTV data in a manner that is acceptable to NASA.

(vi) The NASA Imagery Created Using Dreamtime's Equipment that is used for NASA Mission and Operation Uses and NASA Internal Uses, excluding Commercial Use Imagery and proprietary data of NASA and its affiliates will be placed in the NASA Digital Historic Archives in HDTV format. To the extent permitted by law, NASA will protect the HDTV imagery for a period of 5 years from the date of development of the imagery. At the expiration of the 5 year period, the NASA Imagery Created Using Dreamtime's Equipment contained in the NASA Digital Historic Archives will be available to the public.

(vii) NASA Imagery Created Using Dreamtime's Equipment used for NASA Mission and Operation Uses may be used and released by Dreamtime in the HDTV format at its discretion.

(viii) For NASA Public Affairs Uses limited to breaking or spot news, NASA in its sole discretion may decide to release HDTV, rather than Baseline Format, through NASA TV without financial expense to Dreamtime. In addition, Dreamtime and NASA may mutually agree to release HDTV through NASA TV and share expenses. Further, NASA will consider any Dreamtime request that certain imagery be released in HDTV over the NASA TV, to the extent permitted by law, at Dreamtime expense.

8.3.5 Ground Based Imagery

NASA will use ground-based imagery and equipment in support of its four major enterprises. Each week NASA may release up to 8 hours of this footage in the form of video

files and live shots as part of its Public Affairs Uses. In some cases, NASA will release individual video frames as supporting still photography.

8.3.6 Multimedia Database:

a. Multimedia Database will be searchable and publicly accessible. The Multimedia Database will provide for at least the following two categories of access and search conditions:

(i) All users will have free access and free basic search capability for all images contained on the Multimedia Database. All users may acquire low resolution format of these images at no cost and medium resolution format of these images for a commercially reasonable micropayment. The amount of material available under these conditions will be sufficient to satisfy NASA's reasonable needs to provide for the free dissemination of such images. The free search capability will be equivalent to the basic search function provided on search engines such as Altavista.

(ii) NASA and its affiliates will have free access and free search capability available for all images contained on the Multimedia Database and the ability to retrieve and use imagery in high resolution HDTV. To the extent generally available to other customers, the search capability provided will be the equivalent of the advanced search provided by search engines. Dreamtime will make a mutually agreeable number of accounts available to NASA to enable NASA to access and retrieve high resolution HDTV imagery for the uses described below. High resolution imagery retrieved by NASA and its affiliates from the Multimedia Database may be used for Public Affairs Uses, as limited to breaking or spot news in NASA's sole discretion, and NASA Internal Uses. Any other Public Affairs Uses of the Multimedia Database high resolution HDTV imagery will require the mutual agreement of Dreamtime and NASA.

b. The Multimedia Database will be the property of Dreamtime and it is the sole responsibility of Dreamtime to provide for (i) the protection for the Multimedia Database and of images therein and (ii) the enforcement of any restrictions placed on the reproduction and use of the images contained therein.

c. The Multimedia Database may also include imagery which are or could be legally available for public dissemination including, but not limited to, the NASA Historic Archives, the NASA Physical Property Archives, NASA Imagery Created Using Dreamtime's Equipment and NASA New Imagery. Notwithstanding the inclusion of this imagery on the Multimedia Database, this imagery remains in the public domain and may be accessed by the public through NASA. NASA may retrieve these images using the Multimedia Database and use these images without restriction.

8.3.7 To the extent permitted by law, each Party hereby grants the other Party the intellectual property rights or other legal rights in the imagery or other data created under this Agreement with or without Dreamtime's equipment that are necessary for the other Party to exercise its rights as defined in this Agreement.

8.3.8 Publicly Recognizable Persons

If a recognizable person appears in any imagery, use for commercial purposes may infringe a right of privacy or publicity and permission should be obtained from the recognizable person. If the recognizable person is a current civil servant, member of the uniformed services, or subject to a standards of conduct agreement, they may face restrictions on granting such permission for some types of uses.

8.4 Release of General Information to the Public

General information concerning a Party's activities under its portion of the project that does not disclose any information of a proprietary nature or that is otherwise not subject to restrictions upon disclosure under the Agreement may be released to the public without liability under this Agreement, provided, that prior to any such release, the Party intending to make such release will provide to the other Party hereto reasonable advance written notice of the specific information that is proposed for release and will obtain the other Party's written consent to such release, to the extent permitted by law. The Parties agree not to withhold such consent unreasonably.

ARTICLE IX CONSULTATION AND SETTLEMENT OF DISPUTES

9.1 If there is any conflict between the Articles of this Agreement and the Annexes of this Agreement, the Articles will control.

9.2 The Agreement points of contact will attempt to resolve all issues and disputes arising under this Agreement. When either Party becomes aware of a dispute, it will promptly notify the other Party in writing. If, following good faith efforts, the Parties are unable to resolve the dispute within 14 days of receipt of the written notice, the dispute will be referred to higher level officials of NASA and Dreamtime, as appropriate. If, after a reasonable period not to exceed 30 days, such higher level officials are unable to resolve the dispute, the Parties agree to commence non-binding mediation within 30 days to be conducted by an independent mediator mutually agreed upon by the Parties. If such mediation is unsuccessful, the Parties further agree to consider promptly undertaking alternative forms of binding dispute resolution, including but not limited to, binding arbitration, which arbitration may be conducted under the auspices of the American Arbitration Association and its Rules, at a time and location agreeable to both Parties, subject to the requirements of 5 U.S.C. Sections 571-584.

9.3 The Parties agree that this dispute resolution procedure shall be the exclusive procedure followed by the Parties in resolving any dispute arising under, or based on, an express or implied provision of this Agreement.

9.4 If the Parties are unable to resolve the disputes after exhausting the above procedures, NASA will issue a written decision, which shall be a final Agency decision for all purposes including judicial review.

9.5 Pending resolution of any disputes pursuant to this article, the Parties agree that performance of all other obligations shall be pursued diligently in accordance with the Agreement.

ARTICLE X ASSIGNMENT OR SALE

10.1 Rights under this Agreement shall not be assigned by either Party without the prior written consent of the other Party, which consent will not be unreasonably withheld nor unreasonably delayed. NASA may require that Dreamtime's assignee novate this Agreement. However, in the event that Dreamtime assigns this Agreement to an affiliate or subsidiary in which Dreamtime has at least a 51 percent controlling interest, then NASA's consent to such assignment is not required, provided such subsidiary or affiliate agrees in writing with all of the terms and conditions contained in this Agreement.

10.2 The Parties intend the collaboration under this Agreement to further public interest in and understanding of the human exploration and development of space, and in view of the "family-oriented" nature of the Vortal, Dreamtime will, in consultation with NASA, use reasonable efforts to prevent transfer or assignment of all or substantially all of Dreamtime stock or principal assets to any entity that could not reasonably support these interests. Additionally, due to NASA's need to ensure the ability to maintain public access to this database in a timely, user-friendly manner and to maintain the family-oriented image of NASA, Dreamtime will obtain NASA's concurrence in advance of transferring all or substantially all of the database. NASA's concurrence will not be unreasonably withheld or delayed and will be granted unless the proposed transfer would reasonably be expected to result in the inability to meet the above objectives or otherwise damage NASA's positive image.

ARTICLE XI PUBLIC INFORMATION

11.1 NASA acknowledges that Dreamtime plans to maximize commercial return on images captured by or reformatted by Dreamtime. Dreamtime acknowledges that some images will not be available for public release. With regard to new images, Dreamtime and NASA will develop a process to ensure NASA has adequate opportunity to screen the imagery for sensitive content prior to public release. The Parties may agree to exceptions to the prior review and will work to develop a mutually agreeable process with such exceptions will be clearly defined (i.e., astronaut chat, live broadcast to a school). Neither this provision, nor any other provision in this Agreement, waives any right of publicity or privacy that any NASA employee may possess in any image created under and/or subject to this Agreement.

11.2 In addition, NASA and Dreamtime will coordinate and agree on, in advance, public statement press releases and press conference activity related to the activities under this Agreement.

ARTICLE XII APPLICABLE LAW AND CONSTRUCTION

12.1 U.S. Federal law shall govern this Agreement for all purposes, including, but not limited to, determining the validity of the Agreement, the meaning of its provisions, and the rights, obligations and remedies of the Parties.

12.2 The table of contents used herein is for reference and convenience only, and shall not enter into the construction of this Agreement.

ARTICLE XIII INDEPENDENCE OF PARTIES

13.1 Although this Agreement reflects a decision on the part of the Parties to enter into multi-media collaboration, the Parties are independent of each other, and nothing herein will be deemed to create any legal partnership, joint venture, or association between the Parties. NASA acknowledges that Dreamtime is not a contractor for NASA. Neither Party will have authority to create any obligations for or on behalf of the other Party.

13.2 NASA may contract with other parties in order to purchase or use any multimedia equipment for on-orbit or on-ground use.

ARTICLE XIV EXAMINATION OF RECORDS

The NASA Administrator and Comptroller General of the United States, or any of their duly authorized representatives, will have the right to invoke an audit conducted by a fully certified United States accounting firm. These accounting firms will have access to any pertinent books, documents and records of Dreamtime to make audits, examinations, excerpts and transcripts, necessitated by, and limited to ensuring compliance with, the provisions of Article II. Other laws may provide additional Government rights to access and review Dreamtime records.

ARTICLE XV
AUTHORITY TO ENTER AGREEMENT

This Agreement is entered into by the Associate Administrator for Space Flight, National Aeronautics and Space Administration, in accordance with authority set forth in paragraphs 203(c)(5) and 203(c)(6) of the National Aeronautics and Space Act of 1958, as amended, and consistent with and subject to the rights and obligations of 1) the United States as a Partner in the Space Station pursuant to the Agreement Among the Government of the United States of America, Governments of Member States of the European Space Agency, the Government of Japan, and the Government of Canada on Cooperation in the Detailed Design, Development, Operation and Utilization of the Permanently Manned Civil Space Station (the IGA) of September 29, 1988, or successor agreement; 2) NASA as a partner cooperating agency pursuant to the memoranda of understanding, as amended, referred to in Article 4.2 of the IGA; and 3) NASA as a Party to the agreement concerning affiliation of the Space Station Intergovernmental Agreement pending its entry into force (January 29, 1998), and by William A. Foster, as a duly authorized officer of Dreamtime Holdings, Inc., a corporation duly organized and existing under the laws of the State of Delaware.

FOR: THE NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION OF THE
UNITED STATES OF AMERICA

// signed //

Joseph H. Rothenberg
Associate Administrator for Space Flight
National Aeronautics and Space Administration

5/17/00

Date

FOR: DREAMTIME HOLDINGS, INC.

// signed //

William A. Foster
Chief Executive Officer
Dreamtime Holdings, Inc.

5/17/00

Date

ANNEX 1

DREAMTIME MANAGEMENT

I. Equity Partners (equity percent finalization requires Agreement signing by the Parties):




II. Executive Management:

A. William Foster: Bill is the co-founder and CEO of Dreamtime Holdings, Inc. He was previously the Vice President of Sponsorship and Promotion at Excite and has been with [Excite@Home](#) for three years. While with [Excite@Home](#), Bill created and managed the sponsorship and sales partnership business activities, which were responsible for 60% of the company's revenue from 1997 through 1999.° Bill holds an M.B.A. degree from the University of Chicago, a B.S. in Finance from the Wharton School and a B.A. in International Relations from University of Pennsylvania.° Prior to joining Excite@Home, he was an International Banking° Officer at Continental Bank, Chicago, in charge of the Indian sub-continent and in several private businesses.

B. Carleton Ruthling, Ph.D.: Carleton is the co-founder and COO of Dreamtime Holdings, Inc. He spent two years at [Excite@Home](#) as Program Manager for interactive television, a project funded by AT&T. Prior to [Excite@Home](#), he was an information technology consultant funded by a three-year NSF and RAND award. He was also at TRW for eleven years (five of which were spent at Stanford) working programs ranging from satellite systems, satellite telecommunications, and ground networks. Carleton holds a B.S. degree in Aerospace Engineering from the University of Virginia, an M.S. from the Georgia Institute of Technology, and a Ph.D. from the Thermosciences Department at Stanford University, where he completed a doctoral dissertation on experimental and theoretical plasma physics studying under Professor John R. Spreiter.

III. Initial Activities

A. Line of Credit

Dreamtime will secure a line of credit of not less than \$5,000,000.00 within  business days of the date of the last signature of this Agreement.

B. Commercial or Equity Agreements

Dreamtime intends to pursue commercial or equity agreements with four of the parties listed above. Four of these agreements are planned to be completed within three months of the last signature of this Agreement. In the event agreement(s) are not

ANNEX 1 (continued)

DREAMTIME MANAGEMENT

completed by the planned date, Dreamtime will inform NASA and advise NASA of the revised date by which Dreamtime believes the agreement(s) will be executed. Further, if agreements cannot be reached with one or all of the above listed equity partners, Dreamtime will pursue agreements with other firms of similar stature and capability.

C. Milestones

Dreamtime and NASA agree to the following milestones (start date as of the Effective Date of this Agreement):

New Dreamtime website on-line to public within 6 months.

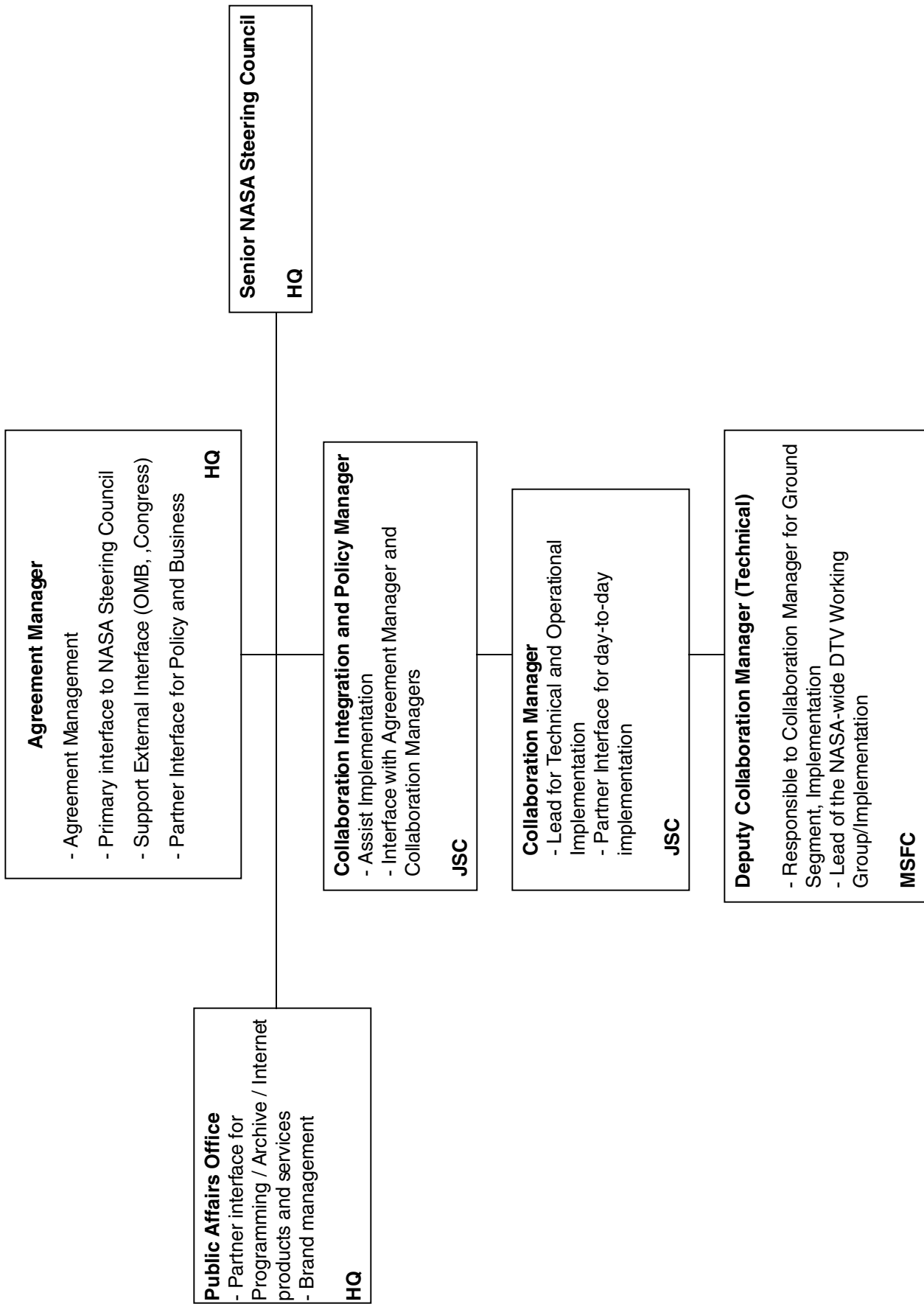
Multimedia database with public access to NASA archives within 18 months.

First documentary to air within 18 months, then a rate of minimum of 2 documentaries per year.

Dreamtime s provision of an initial capability to acquire, edit, and distribute HDTV at each NASA Center, NASA Headquarters and JPL within 24 months of the Effective Date.

Annex 2

NASA Collaboration Organization



ANNEX 3

HIGH DEFINITION TELEVISION (HDTV) AND STANDARD DEFINITION TELEVISION (SDTV)

I. On-Orbit

A. General

The NASA specified hand-held HDTV cameras carried to orbit will be provided by Dreamtime, and will be refreshed as technology enhancements allow for reductions in size, weight, and power consumption as per common NASA practice. Cameras may be utilized for NASA scientific, operational, or Research and Development documentation purposes. All onboard handheld cameras will be camcorders with Serial Digital Interface (SDI) output capabilities. Modifications of flight video equipment and cameras will be required for battery chargers and direct power from Space Shuttle and ISS power. The number of on-orbit handheld HDTV and SDTV cameras for ISS and Space Shuttle may vary from as few as 20 to as many as 40 with additional requirements for upgrade and replacement and training.

Encoders provided by Dreamtime for the Space Shuttles and the ISS must match NASA specifications and meet certification requirements. The encoders will be capable of SDTV and HDTV encoding and will interface to a multiplexer that may be developed by NASA and Dreamtime. The Parties will help facilitate the use of common cameras and video systems for Space Shuttle and ISS. For safety and other concerns non-certified flight video equipment will not be flown on ISS or the Space Shuttle.

NASA, upon completion of testing, will determine the need for encoders for ISS and Space Shuttle. The number of encoders may vary from 5 to 10.

Due to the nature of rigorous testing processes, NASA may, when equipment fails to pass testing, require Dreamtime to modify the equipment and restart testing.

If economically viable, NASA and Dreamtime will pursue improving the communication capability of the ISS with the introduction of new technologies, e.g. Dreamtime may purchase phased array radars to be given to NASA for integration.

Dreamtime may wish to use its volume allocation for Dreamtime unique equipment or trade the resources back to NASA in return for other services. Dreamtime will also work with NASA to provide handheld film cameras and recorders for voice.

Table (1) Implementation as follows*

	Activity	ISS Assy. Flt.	STS Flt	No Earlier Than Date
1	Shuttle Operations SDTV	5A.1	STS-102	Jan, 01
2	Shuttle HDTV DTO	7A.1	STS- 105	Fall 01
3	Commercial Payload ISS			

	a. Prior to A/C	12A	STS -117	Fall 02 through assembly complete (15% of the available commercial allocation, not to exceed the post-AC allocation to Dreamtime)
	b. Post A/C	17A	STS **	Winter 05 _ Rack + delta crew time
4	Future systems			Subject to results of effort described above as well as cost-benefit analyses of both Parties. Refer to paragraph 1.1.1A(ii) in this annex for list of potential projects.

*Subject to the latest ISS assembly sequence and Space Shuttle flight schedule

B. Space Shuttle

The planned Space Shuttle upgrade to a SDTV camera system will coincide with the earliest flight opportunity for Dreamtime, possibly starting with STS-102. The specific future formats for HDTV and SDTV will be mutually agreed to by NASA and Dreamtime as part of the camera certification and selection process. NASA will have the final determination of the configuration and equipment.

The current plan for the Space Shuttle is to fly and test HDTV, SDTV, and processing equipment as a DTO until mature, safe, and certified.

C. ISS

SDTV and HDTV Systems for deployment on the ISS will be matured on the Space Shuttle in the form of DTO activities. Handheld cameras will be deployed as soon as practical. The first implementation opportunity to put this equipment on the ISS is at the end of 01 or first of 02 as a test system. The HDTV handheld cameras could tour the station as early as a Space Shuttle DTO flight in autumn 2001, (STS-105).

NASA will be better prepared to make a decision on the utilization of packetizing equipment for both Space Shuttle and ISS in out years after current tests are completed. Currently the ISS program has plans to fly HDTV as a DTO or commercial payload. Up grades or enhancements such as HDTV or SDTV cameras and hand held HDTV camcorders are being considered. Any cameras or system will be certified for the Space Shuttle first and then will be considered for deployment to the ISS permanently when possible.

A payload allocation for commercial activity could be available for purchase beginning in Fall 2001 on a limited basis through assembly compete. ISS payloads processing takes two years or more for simple payloads. A Dreamtime payload to fly as a part of a bundle earlier than assembly complete will have to begin documentation processing within ISS program office as soon as possible after the signature date of this Agreement. (See Table 1)
The short-term plan for ISS is to follow the Space Shuttle activity regarding development and

deployment of the SDTV and HD TV hand held systems. This includes joint development of on-orbit processing systems, multiplexer (MUX), encoders, etc.

Commercial objective priorities will be established during mission and increment planning.

Due to cost and bandwidth consideration, requirements for enhancements of the analog NTSC cameras on ISS should be developed early enough, for implementation on or after ISS flight Utilization Flight-5 (UF-5).

II. NASA Centers and JPL/Ground Infrastructure

This section describes Phases I-IV HDTV capabilities at each Center and JPL. Dreamtime will provide the capabilities described below according to the following phasing plan:

A. Phase I (first 6 months)

MSFC Fly-Away package and telecine (Fly-Away package allows for documentation of significant events at any Center or JPL during early phase of collaboration. The telecine converts motion picture and roll-film to HDTV or 2K by 2K digital files).

KSC HDTV cameras and recorders for launch and landing coverage (Cameras would replace key positions at both pads for coverage of launches, and would be integrated into the OTV system. Camcorders would be provided for crew activities and landing coverage).

JSC HDTV cameras for documentation including astronaut training activities. Begin testing and development plan for MPEG-2 encoder and HDTV camcorder. Start with digitization of film archive.

B. Phase II (6-12 months)

HQs, GSFC, JPL Initial HDTV capability, HQs and GSFC is where NASA TV is programmed. JPL manages interplanetary missions, and JPL is a contractor-operated facility, and provision of HDTV equipment at JPL is subject to the terms and conditions of that contract.

Flight test for on-orbit HDTV system on Space Shuttle.

C. Phase III (year two)

MSFC, SSC, LaRC, GRC, DFRC, AMES Initial HDTV capability. Allows for HDTV documentation of other Agency activities, including flight research, propulsion testing and development, and future spacecraft design and manufacture.

Maturation of on-orbit HDTV system on Space Shuttle and deployment on ISS.

D. Phase IV (years 3 forward)

All centers and JPL — Refresh and continued expansion of HDTV Ground capability

1. Ames Research Center

The phase III DTV capability for ARC is to support Public Affairs Office (PAO) video collaboration. This includes Video News Releases (VNRs), Live Shots (interviews), live feeds of special events, editing of raw video clips (i.e. B-roll production), animation, duplication and down/up converting, and display capability at selected sites. Distribution of programming will be via physical delivery of tapes and via satellite or fiber coordinated through and utilizing the Center's local video infrastructure and Headend facilities.

In order to provide these products and services, the functional capabilities at ARC will include:

- Field Acquisition (Electronic News Gathering ENG or single-camera style);
- Post-Production of Field Material;
- In-Studio Live Broadcast Capability (single or multiple camera);
- On-location live broadcast (single camera);
- Signal Upconversion;
- Signal Downconversion;
- Media Duplication;
- Editing;
- Animation and graphics;
- Audio recording/editing/mixing;
- Real-Time Release;
- Tape Release;
- Satellite Uplink/Downlink;
- Terrestrial Contribution & Acceptance; and
- Local Collection, Routing, & Distribution.

2. Dryden Flight Research Center (DFRC) Public Affairs Office

The phase III DTV capability for DFRC is to support PAO video collaboration. This includes live shots, video files, B-roll distribution, produced release products and live satellite switched programs.

To support initial PAO collaboration, the following capabilities are needed in the DFRC DTV plan:

- Field Acquisition - ENG and Long Range Field Production;
- Post-Production of Field Material;
- Upconversion of Archive Material;
- Live Shot Capability;
- Switched Multi-Camera Live Productions with Titling;
- On-Site Pool Feed Distribution to Media;
- Real-Time Release; and
- Tape Release.

3. Dryden Flight Research Center (DFRC) Western Area Test Range (WATR)

The phase III DTV capability for DFRC is to support Western Area Test Range (WATR) video collaboration. This includes live long-range tracking video, video tape playbacks, and live satellite switched programs.

To support initial WATR collaboration, the following capabilities are needed for the collaboration in the DFRC WATR DTV plan:

- Field Acquisition - Long Range Tracking Acquisition;
- Recording of Tracking Material;
- Upconversion of Live/Recorded Material;
- Downconversion of Live/Recorded Material;
- Live Distribution of Tracking Material; and
- Display Live/Recorded Tracking Material in Mission Control Rooms.

4. Glenn Research Center (GRC)

The phase III DTV capability at GRC is to support Scientific and Research Programs, Educational Programs, and Public Affairs Office (PAO) video and audio collaboration needs. This includes live shots, video files, B-roll Distribution, and produced release products. Distribution of this material is by satellite; videotape will be in Digital Video Disc (DVD) in the near future.

To support the requirements of the collaboration, the following capabilities are needed in the initial GRC DTV capability:

- Field Acquisition;
- Studio Production;
- Post-Production;
- Switching and Routing of signals from existing facilities with conversion capabilities;
- Real time production transmission capabilities; and
- Tape and DVD release capabilities.

5. Goddard Space Flight Center (GSFC)

The phase II DTV capability for GSFC is to support Public Affairs Office (PAO) video collaboration. This includes live shots (local and remote), video files, B-roll distribution, and produced release products. Distribution of this material is by satellite, fiber optic cable, local Radio Frequency (RF) cable, and tape.

To support the PAO collaboration, the following capabilities are needed for the collaboration in the initial GSFC DTV capability:

- Field Acquisition;
- Transcoding of Graphics, Animation, and Files to Video;
- Production and Rendering of Animation and Graphics;
- Post-Production of Field Material;
- Upconversion of Archive Material;
- Live-Shot (Including Press Release) Capability VIA Fiber Optic Interfaces;

- Switched Studio Live Production with Titling & Minimal Effects Capability;
- Real-Time Release;
- Tape release; and
- Satellite and fiber optic interfaces to Commercial Carriers, Broadcast Media and NASA Headquarters.

6. Jet Propulsion Laboratory (JPL)

The phase II DTV capability for JPL is to support Public Affairs Office (PAO) video collaboration. This includes live shots, video files, B-roll distribution, and produced release products. Distribution of this material is by internal cable, satellite and tape.

To support the PAO collaboration, the following capabilities are needed for the collaboration in the initial JPL DTV capability:

- Field Acquisition;
- Post-Production of Field Material;
- Upconversion of Archive Material;
- Live-Shot Capability;
- Switched Studio Live Production with Titling;
- Real-Time Release; and
- Tape release.

7. Johnson Space Center (JSC)

The phase I DTV capability for JSC will provide production and distribution of video and television programming consistent with current usage in the television industry. There are three primary components of the video released to the public from JSC: downlink video from the Space Shuttle and International Space Station, video recordings returned from orbit, and locally originated live and scripted programming.

JSC is the primary Center for programming and recording live TV from on-orbit. The JSC system will have the capability to cover both the ISS and Space Shuttle mission activities simultaneously. The initial implementation must have the capability of reviewing those recordings and duplicating them in appropriate formats for distribution.

Press conferences and briefings are a prime source of information provided by JSC to the public. The DTV capability must accommodate these types of live productions, which often have scripted components. In addition, interviews, video files, views from the Mission Control Center (MCC) and Special Vehicle Operations (SVO), and other B-roll resources are frequently provided by JSC to the media.

To support the requirements of the collaboration, the initial JSC DTV capability must include:

- Field Acquisition;
- Simple Studio Production;
- Post-production (simple);
- Real-time and scheduled release;
- Distribution of recorded video on tape; and

- Decoders and HDTV recorders.

8. Kennedy Space Center (KSC)

The phase I DTV capability at KSC includes the capability to cover launches, landings and related activities with a limited number of HDTV cameras. Switching and recording of each camera position will be required. The system will allow live feeds to the media and NASA TV, and tape distribution.

9. Langley Research Center (LaRC)

The phase III DTV capability for LaRC is to support the Office of Public Affairs (OPA) video collaboration. This includes live shots, video files, B-roll distribution, and produced release products. Distribution of this material is by satellite and tape.

To support the PAO collaboration, the following capabilities are needed for the collaboration in the initial LaRC DTV capability:

- Field Acquisition;
- Post-Production of Field Material;
- Upconversion of Archive Material;
- Live-Shot Capability;
- Switched Studio Live Production with Titling;
- Real-Time Release; and
- Tape release.

10. Marshall Space Flight Center (MSFC)

The phase III DTV capability for MSFC is to support Public Affairs Office (PAO) video collaboration and propulsion development testing. This includes live shots, video files, B-roll distribution, and produced release products. Distribution of this material is by satellite and tape.

To support the collaborative requirements, the following capabilities are needed in the initial MSFC DTV capability:

- Field Acquisition;
- Post-Production of Field Material;
- Upconversion of Archive Material;
- Live-Shot Capability;
- Switched Studio Live Production with Titling;
- Real-Time Release; and
- Tape release.

Propulsion testing will be supported with the installation of a HDTV telecine with data capability.

11. NASA Headquarters

The phase II DTV capability at NASA-HQ will support Public Affairs Office (PAO) television collaborative requirements for:

- Field Acquisition;
- Post-Production of Video Files and Special Projects, to include Graphics, Titling, Effects, and Animation;
- Production of Original Audio Material;
- Connectivity to GSFC with Standards Conversion as needed for Real Time Distribution and Acquisition via Terrestrial Connection and Satellite;
- Studio and Remote Live-Shots;
- Five Camera Live Switched Production of Press Conferences with insertion of Video B-Roll, Titles, Graphics, and Multi-Center and JPL Q and A;
- Tape Duplication, including Upconversion of analog Archive Material; and
- Viewing for Senior Management.

With the exceptions of Launch Coverage and Live Mission Programming, and until such time as NASA Television policy changes, Headquarters will serve as the main distribution point for NASA Television.

12. Stennis Space Center

The phase III capability for SSC will be a stand-alone HDTV package. The initial configuration will include one camera with field and studio configurations, a 10 input HDTV switcher, a character generator, one deck style HDTV production Video Tape Recorder (VTR), one portable HDTV VTR, non-linear edit or, DTV format transcoder, a distribution level HDTV VTR, a digital audio console, monitors for production, engineering, and viewing, and an Advanced Television Standards Committee (ATSC) compressor/de-compressor (CODEC).

ANNEX 4

PROGRAMMING

Dreamtime will create new programming for NASA-related subjects, especially the International Space Station (ISS). These new productions will be in documentary and/or educational formats. Dreamtime will work with NASA to complete these projects, in keeping with NASA's current internal processes for working with production companies.

Requirements:

1. NASA grants Dreamtime rights to program a minimum of 3-4 hours per day of educational programming (video and related delivered data) that is developed by Dreamtime for broadcast on NASA Television on a non-interference, reimbursable basis. Programming rights will begin upon execution of this Agreement.

2. Minimum of 2 1-hour documentaries, per year, related to ISS, and other NASA subjects on mutual consent, [REDACTED]. First documentary to air 18 months from signing of this Agreement.

3. NASA to provide an escort for Dreamtime's production crew while on a NASA Center or JPL - assumes a minimum of 1 escort per production crew.

4. NASA to provide priority access for Dreamtime's production crews while on location at NASA Field Centers and JPL. Priority access is defined, for purposes of this Annex, as the following order of precedence: 1) NASA Safety; 2) NASA Mission, 3) Breaking news events or previously scheduled events for hard news purposes (for these events, other media may be provided equal access but will not be provided better access than Dreamtime); 4) Dreamtime-NASA Collaboration; and 5) other production events, e.g., documentaries. However, Dreamtime will not necessarily have precedence over previously scheduled efforts pursuant to other Space Act agreements. NASA will work badging with centers and JPL.

5. Educational objectives for NASA-related educational programming must be met in the content and format of the Dreamtime's end product. Experts in NASA's Educational Affairs Division will meet with the appropriate Dreamtime personnel for better understanding of these objectives as well as other educational project possibilities.

6. NASA will provide the necessary interfaces with the NASA TV contractors. NASA will review any request by Dreamtime to utilize NASA TV production equipment and/or contractor personnel for the purposes of meeting these programming requirements, within the current contractual limitations.

ANNEX 5

DISTRIBUTION (STREAMING)

Initially, Dreamtime will not have any customer-unique requirements and will not require any direct uplink requirements. Later, other requirements will be discussed with NASA, for example, the commanding of a camera and expanded communications capabilities.

NASA has an option through Lockheed in the CSOC contract to provide 155 megabits per second (mbps) for station downlink capability. Dreamtime and NASA will work together to enable the option by August 6, 2000.

Dreamtime will look at NASA's current space to ground network and will propose concepts for 21st century modes of providing the same functions at lower cost with greater efficiency. NASA and Dreamtime will also work together to explore opportunities to commercialize excess capacity in the NASA communications network. Dreamtime will work with NASA on the need for a Dreamtime Mission Control presence. Dreamtime will work with NASA to install equipment to apply encryption, digital signatures and media markers, to be agreed to by NASA and Dreamtime.

ANNEX 6

ARCHIVES AND MULTIMEDIA DATABASE

I. General

Currently, millions of images comprise the NASA Agency-wide archives, dating from the beginning of the National Advisory Council on Aeronautics in 1915. These images are in a variety of formats including photographic negatives, motion picture film, audio, video tape, and digital, and are housed at the various NASA Field Centers and JPL. The Parties anticipate working together to transfer analog images to digital, and to create a digital multimedia database for many of the NASA historical images. New images will be added to this database as appropriate. When commercially reasonable and to speed progress, Dreamtime will work with existing NASA contractors and will compensate NASA on a reimbursable basis for actual out-of-pocket expenses.

II. Historical Archives

The goal for creating a digital database of the historic archive is of major importance. The timetable to compile and complete this goal is as follows: 10,000 still images and 10,000 hours of film/video by year 3; 25,000 still images by year 5; and no less than 50,000 still images and a maximum of 17,500 hours of film/video by the end of this Agreement. To meet this goal in the most efficient manner the following must occur:

A. The Parties must determine which images to prioritize for the most cost-effective gain.

Dreamtime and NASA personnel will work jointly to determine those images for inclusion in the digital multimedia database that are most historic, most popular and those having commercial interest. Dreamtime understands that most of the space historical knowledge resides with NASA personnel, and Dreamtime will therefore work with those personnel at each center, JPL and Headquarters to prioritize and develop appropriate digitizing processes. Much of this selection process will be subjective and be in addition to current NASA electronic dissemination of NASA images. In addition to still, film and video images, NASA and Dreamtime will jointly determine what NASA Physical Properties (as defined in 8.3.1 (b)) will be digitized.

B. Regulations Regarding Handling of NASA Originals

The correct handling of NASA image originals is paramount. The National Archives and Records Administration's regulations on appropriate handling of the NASA originals must be followed. Those regulations and guidelines are available in the Code of Federal Regulations (CFR 36, 1232.20, page 625, and a pamphlet entitled Managing Audiovisual Records at <http://www.nasa.gov/publications/recsmgmt.html>.

C. Use of NASA Originals

In many cases, selected images will have a first generation master from which successful, high quality scanning can be made. If this master is unavailable, the Dreamtime personnel may scan the original using the appropriate equipment at the NASA field center or JPL. When a field center or JPL does not have that equipment on-site, a NASA civil servant or existing NASA contractor can transfer the originals to another field center or JPL via NASA transportation. In addition, a NASA civil servant or existing NASA contractor must oversee the handling of NASA originals.

D. Resolution of Digital Masters

Digital master will be in full resolution to create a high resolution master or a high definition master as determined by the original format. NASA is to receive a digital master of all the unenhanced images (Straight Scan Master Copy, as defined at 8.3.1c), including the NASA Physical Property Archive images. The process for the transfer of the master unenhanced straight scan is to be mutually developed by NASA and Dreamtime.

III. Use of Images

A. To the extent required by the other terms of the Agreement, Dreamtime will provide to NASA a digital master copy of the unenhanced straight scans. Digitizing the NASA Historic Archives (analog, NASA-digitized images and NASA Physical Properties Archives) archives will result in a straight scan even though rudimentary dusting and minor color correction might be done. This digital collection may have distinct labeling.

B. Dreamtime may enhance images from the NASA Historic Archives. Copyright to these enhanced images will be held by Dreamtime.

C. Dreamtime will provide, an on-line multimedia database available with two search levels. Images from the multimedia database will be available in low, medium and high resolutions (or, in the case of film, high definition and analog formats). Technical standards for each resolution will match NASA and industry standards. The definition of technical standards will be mutually defined. NASA will retain a master copy of all analog and Physical Property images that Dreamtime digitizes.

D. Dreamtime will work with NASA and NASA's contractors to provide a database retrieval system that can enable Internet access to the different multimedia databases that reside at each NASA center, JPL and Headquarters. NASA may determine to procure certain Internet domain names that include the mark "NASA" ("Domain Names"). Dreamtime will not use any Domain Names without NASA's prior written consent.

IV. Imagery Content at NASA Centers and JPL

A. The following outlines the general content that can be expected to be found at each Center and JPL:

1. Ames Research Center Information technology development, flight research, experimental aircraft development, early aircraft design;
2. Dryden Flight Research Center X-plane flight tests, early Space Shuttle tests, early Space Shuttle landings, current X-craft flight tests;
3. Johnson Space Center Astronaut training, all on-orbit video, film, audio, and still images, Mission Control;
4. Glenn Research Center Aircraft testing, wind-tunnel tests;
5. Goddard Space Flight Center Satellite development. Earth science, solar science, climate computer modeling;
6. Jet Propulsion Laboratory Interplanetary spacecraft development, interplanetary mission imagery;
7. Kennedy Space Center Manned and un-manned space launches, astronaut training, payload integration, and Space Shuttle landings;
8. Langley Research Center Aircraft testing and development, wind tunnels, early manned spacecraft design, early astronaut training, pre-NASA aeronautics;
9. Marshall Space Flight Center Propulsion system and engine testing for Saturn and Space Shuttle, Lunar Rover Development, Astronaut underwater training, development of Hubble and Chandra observatories, US ISS components manufacture;
10. NASA HQs Major policy announcements and press-briefings; and
11. Stennis Space Center Engine testing.